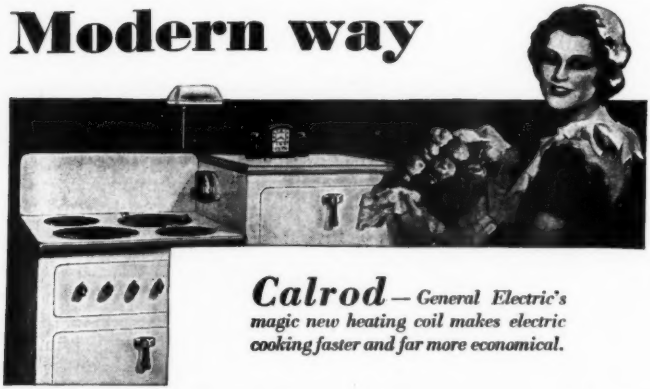
Electricity on the Farm

A Monthly Magazine for the Progressive Rural Family

$50 in cash prizes awarded for best cover titles. See page 35 (inside back cover) for rules.

SWIFT AS ELECTRICITY—CLEAN AS ELECTRIC LIGHT

Bake *and* cook this Modern way



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Hotpoint brings you new freedom. Automatic timer permits accurate cooking of meals—automatically—while you go about other chores or pastimes. The Thrift Cooker prepares an entire meal at an amazingly low cooking cost.

Know the simplicity and economy of the Hotpoint Electric Range. On display at power companies and dealers everywhere.

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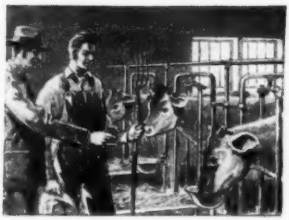
Settle the Question of Water Supply *for* Home *and* Farm.



YOU *need* running water more than any other modern improvement. You *want* it—and you are going to have it some day. Settle the matter NOW when you can make a real saving in costs. Take advantage of the new low prices and install an absolutely dependable MYERS Water System.

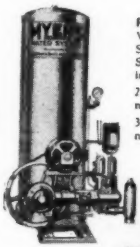


Fig 2510—Shallow Well, Automatic, Self-Oiling Water Systems. Ready to install.
750 gal. capacity now $85.00.
340 gal capacity now $90.00

Fig. 2700—Deep Well, Automatic Self-Oiling Water Systems V-Belt or Silent Chain drive.
Now $130.00 and up

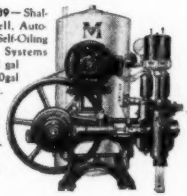


Fig. 2739—Shallow Well, Automatic, Self-Oiling Water Systems with 12 gal tank 250gal capacity, now $77.00.
340 gal capacity, now $82.00.

Pays real dividends on any farm—in comfort and health, time saved and labor lightened, increased production and genuine protection. Backed by a reputation for highest quality—MYERS have been "*Pump Builders Since* 1870." There are reliable standardized MYERS units to meet every problem of individual water service. Models for deep or shallow wells; capacities from 150 to 10,000 gallons per hour. Powered by hand, windmill, gasoline engine or electricity. All MYERS Electric Water Systems are completely automatic—self-starting, self-stopping, self-oiling. They provide ideal trouble-proof service.

Ask any MYERS dealer to show you how much our new low prices save you on Water Systems, Hand and Power Pumps, Pumping Jacks, Cylinders, Hand Spray Pumps and Hay and Grain unloading Tools. Write for Water System booklet together with name of nearest dealer.

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Pumps, Water Systems, Hay Tools, Door Hangers

Take Off Your Hat to The MYERS

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Self-Oiling
Water Systems

Electricity on the Farm

August, 1932
Vol. 5 No. 8

Page

Editorial 7

Remodeling the Farm Home.... 8
BY H. J. GALLAGHER

Hot Water for Cool Kitchens... 12
BY HOBART BERESFORD

Modern Milk Cooling an Important Factor in Keeping Children Well..... 14
BY J. E. WAGGONER

New Ways of Doing It..... 17
BY ANDREW APPLEBY

Saving Money in Shelling Peas.. 20
BY J. P. SCHAENZER

Electric Cooking for Hogs..... 21
BY A. E. HALTERMAN

Electrical Housekeeping 23
CONDUCTED BY GAIL MEREDITH

On the Air..... 28
CONDUCTED BY JEROME J. HENRY

Questions and Answers..... 32

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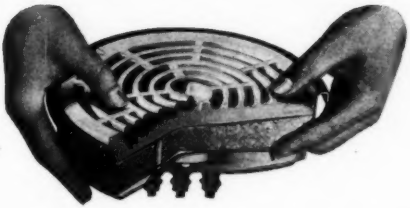
Monarch "Hi-Efficiency" SPEED UNIT



Impartial Tests Made by Disinterested Experts Prove Its Speed and Remarkable Economy

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Monarch

MALLEABLE IRON RANGE CO.

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It is a hot job on a summer day but one that adds much to the attractiveness of the farm.

ELECTRICITY ON THE FARM

AUGUST, 1932

"Three women, three geese, and three frogs make a fair." —Old German proverb.

While early fairs may have been small and unimportant, modern state and county fairs assume huge proportions and not only bring together the best talent in the agriculture field, as well as specimens of the best of agriculture products, but also the latest developments in farm machinery.

Manufacturers who exhibit at fairs put on display the most modern of their products, for they are anxious to show what they have to offer in the way of time, labor, and money saving machinery. Demonstrations they stage are particularly informative.

The judging of live stock affords an opportunity for all to view specimens which are considered nearly perfect. The method employed by the judges in checking up the various animals on display gives the visitor a pretty fair idea which features are considered good, and which defective.

In recent state and county fairs attention has been given to electrified farm equipment on a growing scale. Now brooders and incubators, water heating equipment, water systems, chore motors, electrified farm machinery, and electrified household equipment may be found on display.

When taken as a whole the average well regulated fair serves as a very effective and necessary school for the modern farmer. It should be considered in that light, rather than as a means of entertainment.

In these days of stiff competition, the progressive farmer can profit much by attending the local fair and studying the exhibits from end to end.

REMODELING THE FARM HOME

By H. J. GALLAGHER
Agricultural Engineering Dept.
Michigan State College

ONE of the many problems that confront us today is that of remodeling the old buildings now on the farm to conform with modern methods of farming and modern ways of living. Buildings constructed a few decades ago were not planned to meet the ideals of today. This is especially true of the farm house. Sunlight, sanitation, running water, bath and toilet, electricity, the arrangement of rooms for the saving of time and labor, and labor-saving equipment, were not associated with farm life and consequently did not form a part of the building program. To have these things a farmer moved to town, sacrificing old associations and surroundings that were an integral part of his life. Today the town is readily moved to the farm where under a natural environment the farmer can enjoy all of these advantages. When the city moves to the farm the old farm house does not fill the bill and in the minds of thousands of farmers today is the question of what are they going

Above: Saving time and current.

Right: Look at that angel food.

to do about it, touch a match to the old house and build a new one or do a little fixing and get by for a time longer.

I personally do not believe that either method is the correct solution of the problem, although I will admit that the former is often very tempting. Under the building program of the past generation material and good labor were cheap, consequently many of the old farm houses are better constructed with better material than newer buildings are today and in addition these old houses embody a rather pleasing architectural design that harmonizes with the landscape. In most cases it would be an economic waste to dispose of the old buildings when there are so many possibilities of remodeling them.

Requires Careful Planning

The remodeling of a farm home does not necessarily have to be a very expensive proposition, but it is something that requires careful planning in advance. Figures No. 1 and 2 illustrate how the changing of a stairway and a few doors changed the routine of work in a house and made it more convenient

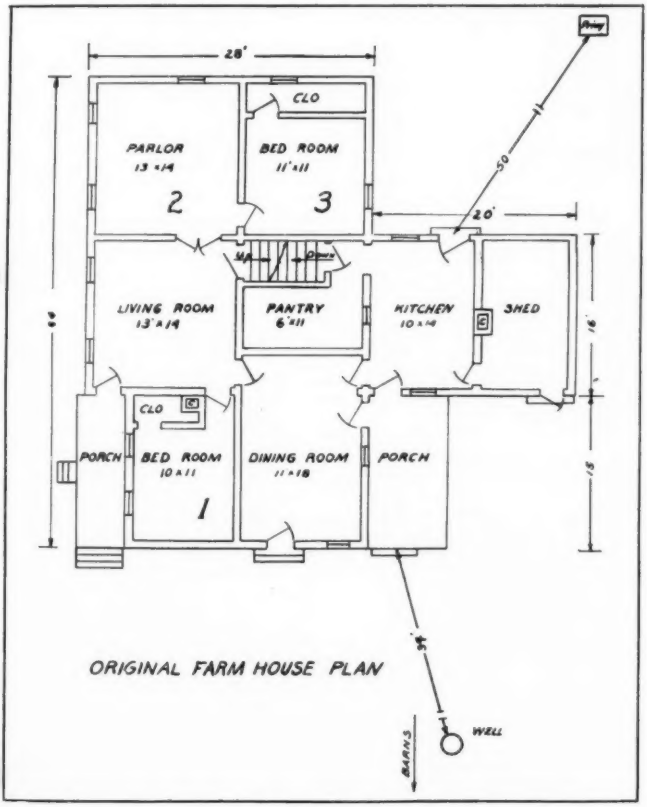


Fig. 1. Floor plan of house before remodeling was considered.

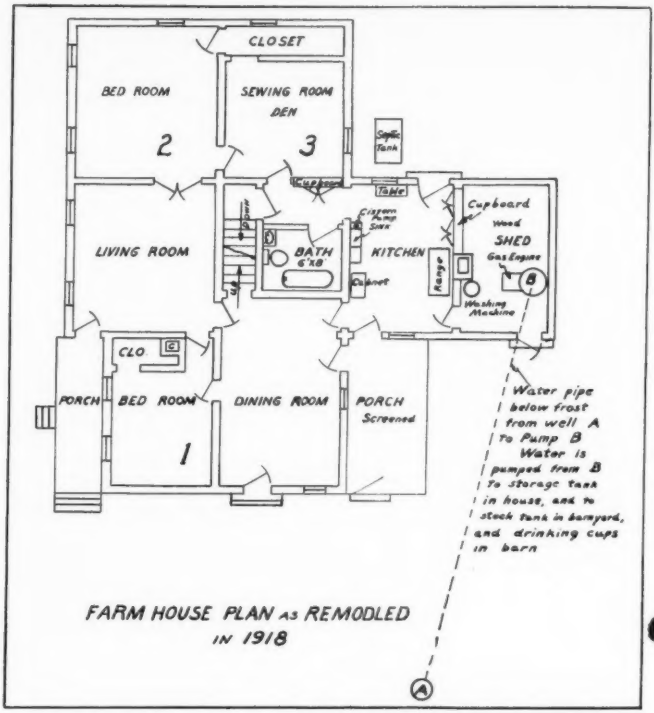


Fig. 2. Plan showing alterations made. These few changes converted the house into a more livable and convenient home. Electric service added the finishing touch.

and livable. The house is a low rambling affair, constructed, as near as I can determine, in 1814. I became the proud possessor of this relic when I began farming in 1916. The original floor plan of the house was not designed to make house work easy. It was necessary to track through both dining room and living room to go up stairs. Bedroom No. 3 was accessible only from the parlor and as we did not own an organ or expect many funerals in our family there was really no need for the parlor. The house was, and still is, heated by stoves and possessed none of the modern conveniences.

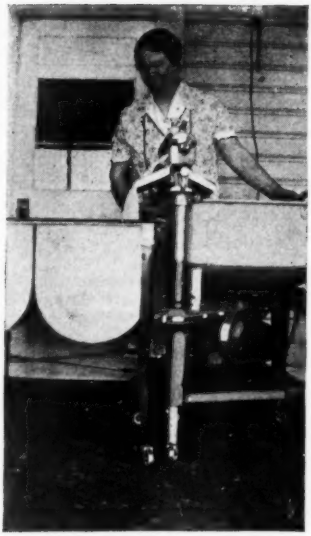
I remodeled this house in 1918 and with only a few changes converted it into a very livable home. The parlor became a bedroom by merely adding a door to the clothes closet of room No. 3. No. 3 became a sewing room and den with a door added to make it accessible from the kitchen. The stairway was changed to open from the dining room and the former doorway sealed to permit better furniture arrangement in the living room. A door was added to room No. 1 to open into the dining room. Full length cupboards were built in the kitchen, the pantry was converted into a bathroom and running water and a septic tank for sewage disposal were installed. The floor of the wood shed was ce-

mented and a drain provided for the washing machine. The back porch was sealed half way to the eaves and screened the rest of the way; it thus made an ideal summer dining room. New floors were laid throughout the house. These changes and additions cost less than $500, but made an unbelievable difference in the living conditions and saving in labor.

Numerous Tasks Accomplished With Electric Power

In 1923 I left the farm without having added the one thing I wanted most of all, electricity. Last year a power line was built past the farm and I wired the buildings and now the tenant has lights where we used to get by with kerosene lamps. He pushes a switch to pump the water, where I used to battle with a gas engine, an electric milking machine laughs at fifteen cows that made me sweat. No longer is it necessary to lengthen the dining room table with bin boards from the granary to feed twenty silo fillers because they do not have twenty any more, a 5 H.P. motor and six men do the trick.

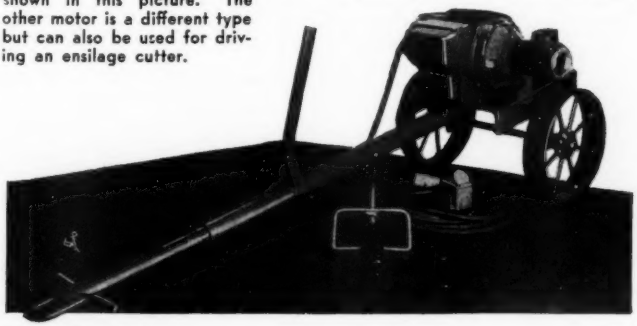
When the question arises as to what to do to improve the old farm house, give the problem some thought. You will find that a change or two here and an addition or so there will make all the difference in the world and then when electricity comes along add the last magic touch and behold! the old farm house has become a modern farm home.



An easy job of washing

"A PORTABLE MOTOR SUITABLE FOR SILO FILLING."

This illustration should have been shown on page 10 of our July issue with the caption which read: "A portable motor suitable for silo filling. The lever works an anchorage device that will either push or pull." The lever is clearly shown in this picture. The other motor is a different type but can also be used for driving an ensilage cutter.

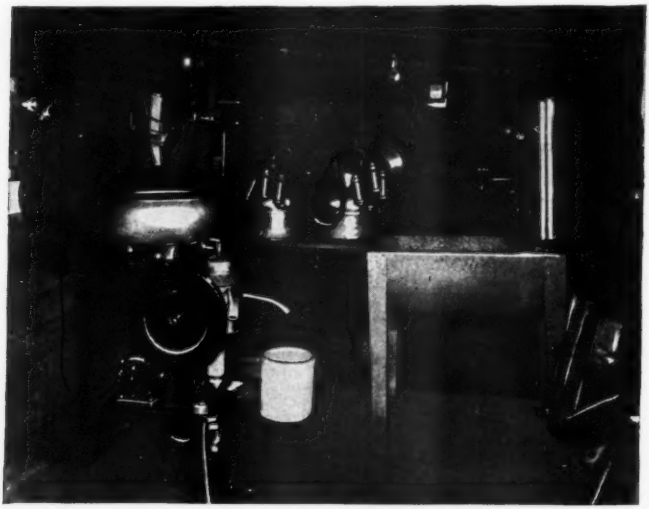


Hot Water for Cool Kitchens

Electric water heaters, properly insulated, permit little heat to escape to the atmosphere. They are quick in action and efficient

By HOBART BERESFORD

TESTS have shown the insulation and circulation details of an electric water heater installation to be more important than the type of heater employed. In the laundry on the Caldwell Substation of the Agricultural Experiment Station of the University of Idaho a double heater installation has been used with success. This outfit consists of an ordinary sixty gallon range boiler fitted with two one kilowatt heating units. One of the heating elements is controlled by a thermostat located in the insulated tank cover and the other circuit is controlled by a hand switch. A diagram of this set up is shown on page 13, which shows the location of the heaters, one near the top and the other near the bottom of the tank. If it is desired to keep a small quantity of water hot all of the time, the upper heater is left on and is controlled by the thermostat, which shuts off when the water in the upper part of the tank is at approximately 160 degrees F. If the full tank of water is needed as on wash days, or other special occasions, both heat-



The water heater and motor-operated separator assist in the time saving realized by the use of the milking machine in this farm dairy.

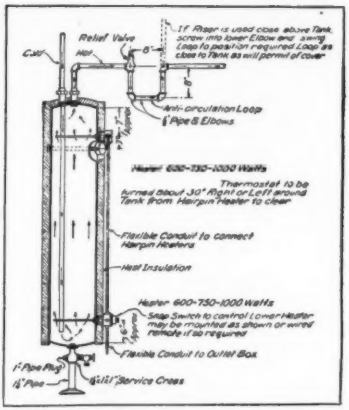
ers are put in operation by turning on the switch that controls the lower heater.

The insulated cover of the hot water heater is very important for both satisfactory heating and economy of operation. If the tank cover is omitted because of its cost, it usually proves to be false economy. One scheme for securing quick heating from a circulating type heater installation is to insert in the pipe union above the heating element a washer with restricted opening (1-4 inch diameter), which holds back the flow of water until the water around the heater has a chance to get real hot. By this system a small amount of very hot water may be secured with a minimum period of operation for the heater.

The location of the hot water tank in the plumbing system is also an important factor in contributing to satisfactory operation. The loss of heat between the tank and faucets is largely dependent upon the length of pipe required and the exposure or covering of this pipe. The tank should be located as close as possible to the faucets which are used most frequently, and where the water is drawn in small quantities. For example, it is more important to have the hot water tank close to the kitchen sink than it is to the bath tub, because the relatively large amount of water required for a bath easily tempers any cool water that might be in the pipe.

Install Relief Valve

In any water heating equipment there is always the danger of getting the water too hot. Where water is supplied under pressure the normal expansion caused by heating tends to back the warm water into the supply line and if excessive pressure results, plumbing fixtures ordinarily designed for cold water use may be injured by the hot water. For this reason a relief valve should always be installed on the hot water outlet of the tank. This valve should be set to operate at five to ten pounds more than the normal pressure of the system, and insures against damage which might result from the failure of the thermostat or neglect on the part of the operator.


Relief Valve
Cold
Hot
6"
If Riser is used close above Tank, screw into lower Elbow and swing Loop to position required. Loop as close to Tank as will permit of cover
Anti-circulation Loop
1" Pipe & Elbows
Heater 600-750-1000 Watts
Thermostat to be turned about 30° Right or Left around Tank from Hairpin Heater to clear
Flexible Conduit to connect Hairpin Heaters
Heat Insulation
Heater 600-750-1000 Watts
Snap Switch to control Lower Heater may be mounted as shown or wired remote if so required
Flexible Conduit to Outlet Box
1" Pipe Plug
1" Pipe
Tee
Service Cross

Type of water heater installation selected for the laundry and dairy unit at the Caldwell Substation farm.

Editor's Note: There are on the market at the present time a number of well designed, efficient water heaters, built by large manufacturers of such equipment. Experiences with electric water heaters on farms throughout the country indicate that they are ably meeting a need in the farm home and dairy.

Sure Thing

"Do you know why there are more automobile wrecks than train wrecks?"

"No, why?"

"Because the fireman isn't always hugging the engineer.—Colorado Dado.

Not Bad for Hoopville

An Easterner stood on the veranda of a little western hotel and watched the sun go down.

"By George," he exclaimed to the native sitting nearby, "That's certainly a gorgeous sunset, isn't it?"

"Not bad," was the answer. "Not bad for a little place like Hoopville."

Modern milk cooling an important factor in

KEEPING CHILDREN WELL

By J. E. WAGGONER

"Yes," says Donner Hoffman, "I'll give you a swallow of my dinner if you insist."

"OH, daddy, how much would you take for baby brother," asked Helen as she watched Brother enjoying his bottle.

"Well, Helen," answered the surprised father, "we wouldn't sell him at any price, would we?"

"Oh, no, I don't want to sell him."

"Then why do you ask such a question?"

"Yesterday when mother and I went over to see Marion's new baby sister her daddy said 'We wouldn't take a million dollars for her, would we, Marion?' And I like baby brother better'n their baby."

This little dialogue between father and daughter is being enacted daily wherever new baby brothers and sisters have arrived in farm or city homes. We all have heard it over and over again. But maybe we have not hesitated long enough to consider the real significance of it—the staggering impossibility of placing a valuation on the life of a baby. Yes, and we can go farther than that and include all the children—their health, growth and development.

Helen was watching baby brother working at his bottle of clean, wholesome, nourishing milk when her active little mind called daddy's attention to the impossibility of placing a valuation on his son. Little did she realize that there is a very close tie-up between the very food that baby brother was enjoying and his health, growth and, yes, his life.

Summer months are anxious ones for mothers. This anxiety comes from the difficulties of properly caring for the food during the hottest months of the year. This is particularly hard during the summer and especially for the most perishable and easiest contaminated foods like milk, butter and cream.

Cities Find Cooling Necessary

The very nature of these foods, which makes them so valuable for children, also makes them vulnerable to the attack of bacteria which quickly render them dangerous to the health of children. The fact that milk or cream sours quickly in summer, if not properly cooled and kept cool, is common knowledge. It is because of this that more and more emphasis than ever before is being placed on clean production and immediate cooling of milk within the first hour or two after being drawn. More and more strict and exacting are the ordinances of cities all over the country regarding the cooling and care of milk before it leaves the farm. Over 422 cities have adopted the

Standard Milk Ordinance as recommended by the U. S. Public Health Service. On the subject of cooling milk on the farm, this ordinance requires:

> "Milk must be cooled within one hour after milking to 50 degrees F., or less, and maintained at or below that temperature until delivery, unless it is delivered to a milk plant for pasteurization or separation, in which case it must be cooled or pasteurized within two hours of the time of production."

"Why should milk be cooled within an hour after milking?" is a good question to ask right here.

Because research projects conducted by the U. S. Department of Agriculture have established the fact that temperatures of less than 50 degrees F. slow down the growth of yeasts, molds and bacteria. This means that by maintaining a temperature of 50 degrees or less, the food of man is protected against the rapid increase of health destroying bacteria.

The cooling should occur shortly after milking because of the fact that freshly drawn milk has what are called "germicidal" properties, which prevent the bacteria from increasing within an hour or so after the milk is drawn even though it is not cooled. This is a very important period, because it gives the milk producer time to reduce the temperature to a point where the growth of bacteria will be very slow.

The "germicidal" properties of milk cannot be depended on to kill bacteria. But it is important that they prevent an increase of bacteria immediately after the milk is drawn, because that safeguards this valuable food during the time which should be utilized to cool it to a temperature where bacteria will not increase very rapidly.

Like Electric Milk Coolers

Over near Algonquin, Ill., lives a milk producer by the name of Anton Sucky, who markets his own milk. About a year and a half ago Anton found himself face to face with the problem of cooling his milk properly and quickly enough to retain its keeping qualities.

"I had lots of complaints with my milk before I put in the electric milk cooler," said Mr. Sucky. "Women would say that the milk

The Kingsley Dairy Farm milk house, Columbus, New Jersey, is equipped with modern refrigeration equipment for cooling and storage of milk.

I delivered to them in the morning was spoiled by night. But since I installed the electric milk cooler, the very same kind of milk I was producing before keeps for two or three days and my customers like it so much better.

"Why, when I cooled with water I used so much that there was a young creek running down across my yard all the time. Down there in the corner of the yard was a great hog wallow and mud hole. You see now it is perfectly dry.

"My own kiddies like the milk a lot better. In fact, it is more like certified milk, because it is cooled down in such a short time after milking. I believe that the electric milk cooler is the cheapest way of cooling milk because it saves so much labor and especially when you consider what you get out of it."

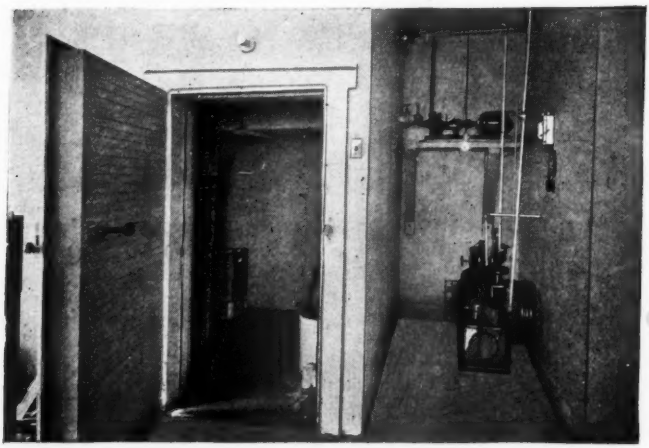
On the Miller Farm, just a short distance from Dundee, Ill., there are two very interesting brothers, W. F. and T. H. They distribute their milk direct to their customers and have found that the electric milk cooler has been a valuable help to them in meeting competition and in keeping their customers well satisfied. In these days of severe competition quality counts for more than ever before.

When the Miller Bros. used ice to cool their milk, they required from 350 to 400 pounds a day. This cost a trip to town and from $1.25 to $1.75 a day in addition to at least two hours of hard work. The electric milk cooler has eliminated all of this and as Mr. Miller says, "If you can save 20 minutes a day, it pays to do so." Mr. Miller says they can hold their milk for two days or more and still deliver a very satisfactory product, and this alone saves them lots of waste and other difficulties. As Mr. Miller can talk with more authority than I can, we will repeat his own words.

"The electric milk cooler has been a great convenience for the entire family. We make butter and can hold any amount of butter almost any period we find necessary. We feel sure now that our milk is ideal for our children, and that in itself means more to their health and growth and happiness than I can explain, but I am sure that other fathers and mothers will understand.

"My brother and I feel that the milk cooler will pay for itself in

(*Continued on page 22*)



Electrically operated refrigeration equipment safeguards the milk on the Fred. Schornstein farm near Kokomo, Indiana.

Sometimes they go out to the farm and learn how to tackle a job.

NEW WAYS OF DOING IT

By ANDREW APPLEBY

WELL, sir, I took a little trip the latter part of June, and it did me a world of good. I went over to Columbus, Ohio, and attended a convention. We've all heard a lot about conventions this summer, but this one was different. It wasn't political, and there was less hot air and more hard sense in its meetings than I've heard in a long while. It won't be followed by any campaign of speeches about prohibition, the tariff, or farm relief, but real genuine, practical farm relief got a big boost without any big noise.

It was the annual meeting of the American Society of Agricultural Engineers. Only about half a dozen of us active operating farmers were there and I never had been before, but after I saw the exhibits and heard the talks, I realized that those fellows have something to offer pretty nearly every one of us.

It seems that an agricultural engineer is most every other kind of engineer except that he puts his skill and effort directly on agricultural problems. He may be a civil engineer who works on the best methods of irrigation and drainage. Perhaps he is a mechanical engineer trying to improve farm tractors; or a chemical engineer, studying tractor fuels or better and safer farm explosives. You know there is not such a world of difference between dynamite and gasoline, at that. The old original Adam of our present race of gas engines ran on gunpowder. The big difficulty was getting each new charge of powder into the cylinder.

Construction of Farm Buildings Being Studied

Another important group of agricultural engineers is the architects and farm structures men. They are solving the problems of better and cheaper farm buildings, making them more comfortable and more durable through the use of insulation, ventilation, better materials, and even better paints and preservatives. But the fellows I saw and listened to most

were the electrical men who are trying to fit electricity to all kinds of farm jobs. Why, before the convention was over, I heard of several brand new jobs for current, not taking the place of some other way of doing it, but things that few farmers had ever thought of doing at all.

Men were there from the agricultural colleges all over the country, and from several divisions of the United States Department of Agriculture. But there was nothing high-brow or high-hat about them. They came to cooperate and to exchange ideas with each other, and they got right down to brass tacks without a lot of small talk. The commercial men were there, too, employees of companies that make farm machinery, building materials, or electric current. And they didn't come with any idea of selling something, either. They seemed anxious to learn all they could, and in exchange to tell of the progress they were making in solving common problems.

The exhibits in connection with the meeting illustrate how almost every farmer can profit by the work of the Agricultural Engineers. They ranged all the way from a complete miniature oil field with wells, pipe line, pumping station, refinery and distributing plant to a full-size model of a green house bench showing the electric wires that heat the soil and the plants actually growing in it.

In between were some exhibits that an average chap like me could put to good use right away. For instance, there was one of galvanized roofing and siding that showed how much cheaper it is in the long run to buy the sheets bearing a standard seal of quality because they have an extra heavy zinc coating of 2 ounces to the square foot. They resist rust for years after cheaper metal with less galvanizing has been ruined.

Insulation of Cooling Tanks

But the exhibit that will save me the most uncertainty was a display of insulation for milk cooling tanks.

I have read that the insulation in the walls and bottom of a tank has to be made more than waterproof. All the bulletins say that if it even absorbs moisture it is no good. The only way to keep the moisture out of the blocks of insulation is to coat them thoroughly with a waterproof treatment on all sides.

A Novel Burglar Alarm

I wish I could tell you all that I saw and heard over there at Columbus. But they had a full pro-

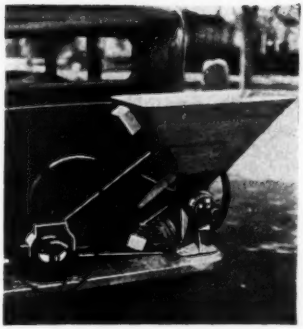
The Agricultural Engineers take their demonstrations right out to the farm.

gram for three or four days, and it would take pretty near that long to review it. However, there were some other things of immediate importance. John R. Haswell, agricultural engineer from the Extension Division at State College in Pennsylvania, gave a mighty interesting demonstration of how to put in a burglar alarm that will give any chicken thief the surprise of his life. It was clever, and if we farmers would only use it we could stop a lot of losses.

Ventilation Demonstrated

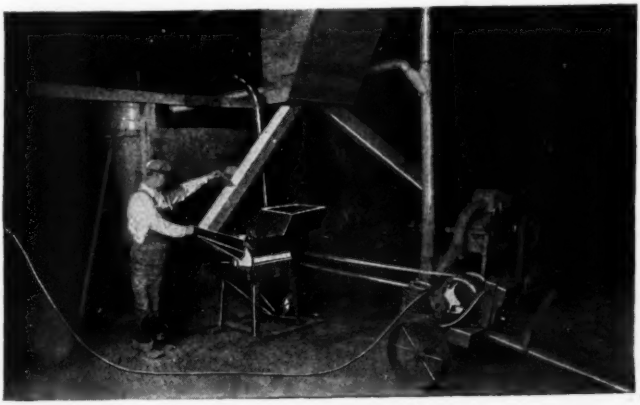
Another convincing demonstration showed the air currents in a barn and how a good ventilating system gives even distribution of fresh air. The model had intakes and an outlet, and a little motor-driven ventilating fan that gave perfect ventilation. Professor F. L. Fairbanks from up at Cornell explained the whole thing.

Potter Hess, who works for a manufacturing company, had a new wiring device. It took the place of a fuse and a switch. It looks like an ordinary switch, but it will turn off the current when the load is too heavy. Somebody had rigged one up on a feed mill so that it would stop the motor if the mill should get jammed or clogged and it would also stop it when the grain was all ground and the hopper was empty.



This man carries a feed grinder right on his car so he can show his customers just how it works.

I tell you those "ag" engineers have done a lot to make farming an easier job with better results. I'm certainly glad to get a better idea of their work. The next time I have any problem about anything mechanical I'm going to take it right straight to an agricultural engineer of the experiment station or some implement manufacturer, or the power company. They seem anxious to work out a satisfactory solution.



An engineered feed grinding set up.

Saving Money in Shelling Peas

Electric motor proves its simplicity and convenience as compared with other power.

By J. P. SCHAENZER

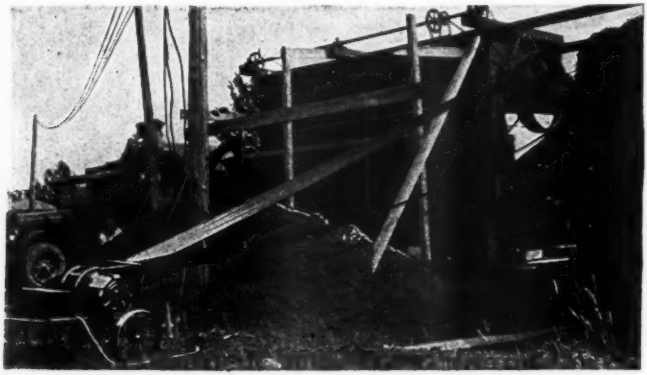
Project Leader, Wisconsin Committee, Application Electricity to Agriculture

IN the summer of 1930 more than twenty-two million cases of peas were canned in the United States. Each case contains 24 cans. Most of these peas are grown in an area east of the Mississippi and north of the Ohio River. Production averages about 2,000 pounds of shelled peas per acre and the price varies from 2 to 4 cents a pound.

The vining or shelling of all those peas is a big job and requires a lot of mechanical power. During the past it has been furnished mostly by gasoline or steam tractors. During recent years, electric motors, five and seven and one-half horsepower in size, have been used in several instances with excellent results.

During the summers of 1930 and 1931, a Scott single-unit viner was operated with a 7½ horsepower, 1,750 r.p.m., motor by Fred Schultz, Merrill, Wisconsin. A 4½-inch diameter pulley was used on the motor and 48" on the viner. The gear ratio of the viner was such that this gave an apron speed of 24 r.p.m. which was used throughout both seasons. Apron speeds ranging from 22 to 28 r.p.m. are used by different operators, depending primarily upon the tenderness of the peas. The more tender peas require a slower speed.

The capacity of the viner depends upon the quality, yield and size of the peas. Eight thousand pounds of shelled peas are considered a good run for a tractor-driven viner in a ten-hour day. This is the product of about twenty loads of peas from the field.



Pea viner test at the Fred. Schultz Farm, Merrill, Wisconsin. A 7½ horsepower Chore Boy motor shown at the left furnishes the power for the pea vining.

In a fifteen-hour run, Schultz reports threshing thirteen loads or 9,500 pounds of peas and using a total of 53 kilowatt hours.

When asked about the desirability of using electricity as power for pea vining, Schultz replied, "I saved in the cost of operation $135.00 in 1930 and $140 in 1931, in addition to the labor of one man who was always needed to take care of the tractor. The outstanding feature of using an electric motor is the simplicity and convenience of it as compared with other power."

ELECTRIC COOKING FOR HOGS

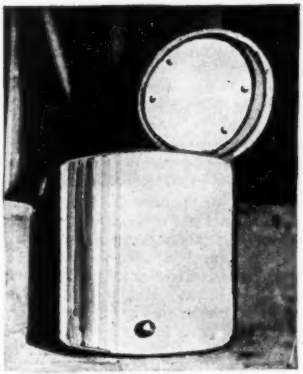
By A. E. HALTERMAN

CHRIS BOERGER operates a farm of 275 acres a short distance south of Marysville, Ohio, raising general crops with soy beans and hogs as his specialty. He harvests his soy beans with a combine, and, besides supplying seed for surrounding farms and seed companies, he feeds a goodly quantity to his livestock.

He has been cooking soy beans by the open kettle method for several years, firing it with wood. This method produced an excellent feed but required at least an hour each day to cut wood and care for the fire. Besides the beans would cool off and had to be fed cold and even frozen in winter weather. This became very disagreeable out of doors in the winter time.

When high line electricity became available to him the possibility of cooking beans electrically suggested itself to him. He got in touch with the rural representative of the power company, who, in turn, called on the State University to help work out a practical cooker. As a result Mr. Boerger is now cooking his beans electrically with very little labor and inconvenience.

A cylindrical tank was built with an outer shell forming a space which was filled with mineral wool to retain the heat. A 2,000 watt immersion type electric heating unit which was designed for a water heater was inserted from the side near the bottom of the tank and extended almost entirely across the bottom of the tank.



A 2,000 watt immersion type electric heating unit supplies the heat for this cylindrical cooker. The space between the shell and tank is filled with mineral wool to retain the heat.

A special perforated false bottom was made to fit just above the heating unit to prevent the beans coming in contact with the unit and causing the unit to burn out. In this way there was a space about four inches deep in the bottom of the tank for clear water. An insulated lid closes the top, and a drain pipe in the bottom permits the draining and cleaning out of the tank. The unit is controlled by a time clock, which turns the current on and off during the night

so that the beans are ready to feed in the morning. They will stay hot all day, thus providing warm feed all the time for the hogs.

Mr. Boerger measures two bushels of beans and a certain amount of water into the cooker every evening and sets the clock. It requires about 5 KWH of current per bushel cooked. The cooker can be built and installed for approximately $50, not including the time clock. Care must be taken to clean off the unit every day, as fine particles will collect and crust on the unit and finally burn it out.

Mr. Boerger frequently heats poultry drinking water or water to wash his milker and warms his tractor oil by simply sinking a pail deeply in the hot beans.

He has the cooker inside the barn, where it is handy to care for and out of the weather. He finds that the protein requirements for hogs can be entirely supplied by this method, and by feeding minerals he can produce 200 lb. porkers in less than six months without buying tankage or other protein feeds, and in addition he markets his own crop at a good price. Cracked beans and weed seeds cleaned from grains go through the cooker and are eaten by the hogs, thus destroying the seeds.

No Grinding Required

The beans do not require grinding, as they are soft enough to mash between the fingers. Not only hogs but poultry and dairy cows relish the cooked beans very much.

The Ohio Experiment station, in Bulletin 452, reports experiments on cooked soy beans that prove the value of this process.

Mr. Boerger says that the oiliness so often found when soy beans are fed to hogs is not evident in the carcasses of the hogs fed cooked beans. They are firm and of the highest quality.

Pork can be produced and marketed in a shorter feeding period than with corn and tankage ration and with a smaller total feed requirement per 100 lb. of pork produced. When we consider that this can be done on farm-produced feeds at such a low cost and without the necessity of paying out cash for protein it certainly offers a chance for improving our feeding methods and adding to the net profit on the farm.

Several of Mr. Boerger's neighbors are following his example and installing feed cookers for soy beans.

Keeping Children Well

(*Continued from page* 16)

a surprisingly short time. It is large enough to hold ten 10-gallon milk cans, so you know our investment is rather large, but we are highly pleased with it because we know that it is paying its way much faster than we anticipated. I am honest in saying that we would not part with the cooler if we could not get another."

A survey was made of a number of cities throughout the central states in May this year to determine whether milk pre-cooled on the farm was sold at the same, or a higher price in adjoining cities. Sixteen replies were received from Health Departments of these cities. In twelve of them high grade, clean milk precooled on the farm brings a better price than other milk. This increase in price varies from $1 a hundred to as much as 4c a quart more than other grades of milk. In one Nebraska city precooled milk brings 50 per cent more than does the common grade.

Summing up the reports, from these various cities, from users of milk coolers, and from other farmers, it is agreed that there are two essentials in milk production—*cleanliness* and *cooling*. They are of equal importance. Even clean milk not properly and timely cooled soon becomes unfit for human food. Because of the importance of cooling, the electric milk cooler is filling a very important place in milk production. Aside from the marketing value of pre-cooled milk, it is now being fully realized that if pre-cooling is necessary for city markets, it is also fundamentally important to pre-cool the milk and properly preserve it for the use of the farm family.

ELECTRICAL HOUSEKEEPING

Conducted by
GAIL MEREDITH

Cool Drinks for Hot Days

WE used to live across the street from an entrancing family with lots more children than money. The young folks were in and out of our house a good deal, often staying for meals. One hot July night I was making lemonade for supper. Jack, the ten year old, was hanging about the kitchen, watching the preparations.

"You take two lemons, don't you?" he observed. "We do, too. I think it makes it better."

A pint or a pailful, two lemons was the prescription.

For Fastidious Palates

But when our families reach more discriminating years, a faint flavor of lemons and a few thin slices floating about on top of a pitcher do not make an entirely satisfying drink. They demand a little more substance to their lemonades, and a little more variety to their flavoring.

Here is a drink for the most fastidious palates.

3 lemons
½ cup sugar
1 orange 1 cup juice in all
3 cups water

Boil up sugar with one cup of water and let it cool. Add the fruit juice and the rest of the water. Chill. If you serve it with ice cubes and would keep it not too much diluted, leave out one cup of water.

Six years ago when I was attending the annual meeting of the American Society of Agricultural Engineers at Lake Tahoe, Mrs. Ben D. Moses, the wife of one of the agricultural engineers at the University of California, entertained a group of us at her home at Davis. She served us, I remember it most vividly even after all these years, the most delicious iced tea I have ever had.

She made it, she told me, by

Plenty of ice is the first requirement for cold drinks.

The oranges are cold and ready.

steeping the tea in the usual way, then adding to it a special syrup of crushed mint leaves, one cup of sugar, and one-half cup of water, boiled till it spun a thread, and a generous flavoring of lemon juice. She topped it off, of course, with a few sprigs of mint floating about on the ice cubes.

Since the amount of the syrup and the amount of the lemon juice depend entirely on the amount of the tea, mixing it all together is a matter of taste.

Almost everyone likes iced tea, but iced coffee is new to many of us. There are many ways of serving it. Some folks like it black with whipped cream on top; some put the cream and sugar in before they chill it, and some fix it with cream and sugar as usual, then add a dab of whipped cream at the last for looks. They are not calorie counters, are they?

Most of the younger generation seem to like the fizz and sparkle of ginger ale in their drinks these days. Many current recipes call for it. Here is a grape juice drink with so many other things in it that Miss Marion Sawyer, who devised it, might have called it most anything as well as

Grapeade

3 lemons	1 pint grape juice
2 oranges	1 cup sugar
2 cups water	Cherries or mint
1 bottle ginger ale	leaves

Add the juice of the lemons and oranges to the grape juice; add the sugar and water and let the mixture stand in the refrigerator for several hours. When you are ready to serve it, add the chilled ginger ale, and put the cherries or mint leaves in the top of each glass.

Here is another:

Ginger Ale Grape Cocktail

2 cups sugar	2 cups grape juice
2 cups water	Juice of four lemons or limes

Boil sugar and water five minutes. Add grape juice and fruit juice. Let cool, pour one-half cup over ice cubes or crushed ice in tall glasses. Fill up with ginger ale and stir.

If you have cider in your cellar, you can make it the basis of many fancy drinks.

1 quart of cider	1 cup water
2 oranges	2 lemons
	1 bottle ginger ale

Add the fruit juices to the cider and put it in the refrigerator for several hours. Just before serving add a bottle of ginger ale.

If you want to dress up your drinks with fancy ice cubes, there are several ways to do it attractively. You can freeze water with lemon juice in it to serve in plain iced tea. Use a quarter cup of lemon juice to two cups of water.

Pour a bottle of ginger ale into one of the freezing trays and use the cubes in any fruit drink. You can even freeze grape juice to a mush and add a spoonful to each glass of lemonade for color and flavor.

• • •

Cool Cooking in Small Cookers

SMALL electric cookers offer one way of keeping the kitchen cool these hot August days. I mean those portable cookers that are really little round ovens that you can use anywhere within cord's length of a convenience outlet.

They do not look like the ovens we are used to, not in the least. They look more like fat pails. Only to picture them you will have to imagine a pail with double walls and a thick layer of insulation between to keep the heat inside

where it belongs. The inner wall is made of aluminum, and the outer one either of chromium or gay colored enamel. Like any other pail these cookers have a heavy wire bail with a wooden handle to carry them by.

The heating elements are sometimes in the bottom and sometimes around the sides of the cooking well. One cooker has an open burner like a small hot plate, but in most of them the electric wires that carry the current are concealed. One manufacturer has brought out a special attachment for his cooker, a reversible cover that fits into the top of the cooker for broiling, or turned the other side up is a grill for frying.

Cookers come in various sizes from four quarts to ten. The larger ones are fitted with several containers to cook more than one thing at a time. One cooker has two shallow round pans designed to fit one on top of the other and rest on a roast in the bottom of the cooker. Another has two round vessels that just fill the cooking well. A third has a single round pan big enough to hold a good sized roast and twin or triplicate pans that rest on top of the first one. A wire rack keeps the pans off the bottom of the cooker. Some of the pans have well fitting covers that clamp down tight for waterless cooking.

You can really use one of these cookers for a great many things. If the size of the dishes fits your family, you can get a whole meal at once, a roast, vegetables and a dessert. You can steam vegetables and puddings and cereals. You can fill it up with soup or savory stews. You can roast meat enough for a dozen hungry men. If you make doughnuts or that lovely thin Norwegian delicacy, fattigmand, you can heat the fat in the cooker and do your frying out on the shady back porch.

A Variety of Uses

You can pop corn in it, or carmelize condensed milk for puddings. And if you wish you can turn the cooker on its side, or in some cases get special racks and pans, and bake cakes, pastries, and biscuits in it.

Nor is this all. It will help take care of the baby too. Not long ago I stopped in to see a friend of mine who had just brought home an eight week's old baby from The Cradle in Chicago. She

was busily engaged with the formula for the day's feeding.

It was still early in the morning, but the sun was already hot.

"Whew," she said, brushing a lock of hair out of her eyes. "Another scorcher. I am glad I don't have to heat up the kitchen again today."

"Doesn't anybody eat around here?" I asked.

"They do," she replied emphatically, "including—no—even particulary—the child. I cooked his formula right after breakfast, and will warm it in the bottle warmer. I am not even keeping the fire up to sterilize the bottles. I am going to do that in this electric cooker of mine."

She nodded toward a large cooker standing on the table at my elbow.

"I can put eight bottles on the rack in this round pan. I pour in two cups of water, put on the cover and run the cooker on high for about an hour. They tell me I can do it in twenty minutes from the time it starts boiling if I want to watch it, but leaving the bottles in an hour does it in fine shape. As soon as they come out, a roast of beef will go in, and long about eleven o'clock, I'll put in some scalloped potatoes, and a little later some new peas from my garden. They will all be ready by noon. Better stay and see how good they'll be."

Explorer Praises Cooker

One of these cookers went to the Antarctic with Admiral Byrd. He got the current for it from a farm lighting plant. The manufacturer's representative who told me the tale said that he himself had talked with Admiral Byrd since his return and found that he had used the cooker for much of their cooking because its insulated walls, with their conservation of the heat, and retention of it long after the current was turned off, was actually an economy of gasoline. The great specialty of the cooker on this expedition was roast walrus meat, a dish Admiral Byrd insists was particularly delicious.

It is no small convenience to have a compact cooker like this anywhere. In a simple contrivance you can lift with one hand, you can tuck away a whole dinner. It will require little or no watching. Since the food cooks evenly and slowly, you can go off and leave it for hours if you like.

Just Plug In

Because the fuel comes in on a cord and there is no fire to build with its muss and dirt and ashes, you can use the cooker anywhere you can plug it in. Of course it belongs in the kitchen, but it may be very useful in the sick room, too.

Its insulated walls hold the heat for a long time, so you can get your cooking done ahead of time, and you can bundle the cooker into the back of the car for a picnic hours and miles away. Still the food will come out piping hot.

The wattage of these cookers is never very great, so the cost of operating them is slight. Some of them use 400, some 600, some 750 watts on high, and as little as 140, 100, and even 45 watts when they are set for low. It does not take very much heat beacuse the cookers are small, and the heat is shut up tight with the food, cooking it.

Taking care of the cooker is a simple job. It is easy to clean both inside and out. There are really only two precautions to keep in mind: Always keep the terminals for the electric connection out of the water, and leave the cover off, to prevent any accumulation of stale odors.

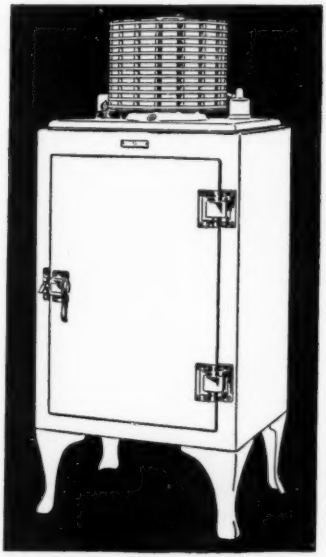
• • •

(*Electrical Housekeeping Department continued on page* 31)

One
IN EVERY *three*
is a General Electric

● *Today every third home with electric refrigeration has a G-E*

THE unfailing dependability of the General Electric Refrigerator has brought lowest cost refrigeration service to one in every three homes enjoying electric refrigeration today! In these homes the famous Monitor Top mechanism has made an unparalleled record for attention-free and expense-free operation. If you choose a General Electric Refrigerator, you do not have to take into consideration the distance to the nearest service facilities. Every moving part of a G-E is hermetically sealed within the steel walls of the Monitor Top. It requires no attention—not even oiling. Built and guaranteed by the world's greatest manufacturer of electrical merchandise, its operation is as dependable as your electric meter. General Electric Co., Electric Refrigeration Dept., Section CZ8, Hanna Building, 1400 Euclid Ave., Cleveland, Ohio.



GENERAL ELECTRIC

ALL-STEEL REFRIGERATOR

Domestic, Apartment House and Commercial Refrigerators · Electric Milk Coolers

ON THE AIR

Conducted by
JEROME J. HENRY

How the Artists Spend Their Holidays

SOMEONE, going through the CBS studios, asked the various radio stars how they spend their time on weekends and holidays and learned that David Ross prunes the trees in his backyard. Gus Van coaches an orphanage baseball team; Lanny Ross catches up on his reading; Morton Downey battles against his waistline by swimming, playing baseball, and engaging in other exercises.

Leon Belasco writes a long letter to his parents in Manchuria; Jacques Renard takes his family motoring; Willard Amison sings in church; Tony Wons finds the weekend his busiest time and devotes his holiday to answering his mail; Singin' Sam goes fishing; Mabel Jackson goes to the beach, but not to swim, for she's afraid of the water.

Drawing shows air view of "Radio City" in construction in New York City. This project is destined to become the radio and cultural center of the entire world. It will house the most extensive broadcast studio system, offices, and other major activities. In beauty it will excel any project the country has ever planned.

• • •

Announcer's Life Isn't Easy

THEY work 30 minutes a day —and draw eight hours pay for it. But the announcers' lives aren't easy ones. Thirty minutes a day will cover the amount of time their voices may be heard over the air most any day but during the remainder of the time they are on duty with rehearsals, auditions, or just waiting between numbers, between shows, or between station announcements.

The announcer is subject to call at any time for any assignment. Many of them keep a bag packed because they never know when a call may come that will send them many miles away for some special pickup.

• • •

Deserted Lumber Yard to Sing

JOSEPH PARSONS was expected to take over his father's lumber yard in Indianapolis, Ind., so he was educated accordingly. In his last year of high school, fate took a hand when his teacher entered him in a voice contest and Joe walked away with a scholarship to a college of music.

Many interesting experiences dot his career. His first check was for $25 for a part in "The Savage." He remained on the stage about twenty years. While on a vaudeville tour in Chicago he met Gene Arnold. They had pounded the pavements in New York together and had roomed at Mrs. Stien's

boarding house on 45th Street. In Chicago Gene induced him to take a radio audition. Jo went over and has remained with radio ever since.

Perhaps you know him as "Jingle Jo, the Big Basso."

• • •

Ten Years Ago—What Stars Were Doing

TED HUSING was completing the current basketball season as high scorer ten years ago. Now you hear him on many CBS broadcasts, often as a sports announcer. Kate Smith was singing her way through the seventh grade. Ben Bernie was doing vaudeville, Irene Beasley was an ambitious school girl at Amarillo, Texas.

Morton Downey was holding a French horn and singing the choruses with Paul Whiteman's orchestra. Nat Brusiloff was fired by his brother from his job as first violinist in a Washington theatre orchestra. Vaughn de Leath was already a veteran broadcaster, having been the first woman to sing into a microphone. The four Mills Brothers were entertaining the customers in their father's barber shop in Piqua, Ohio.

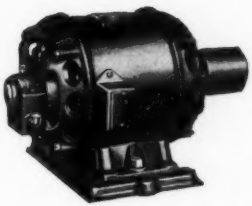
• • •

Notes on the Famous Lombardo Gang

ONE of radio's pioneer orchestras, Guy Lombardo and his Royal Canadiens, continues to be followed in frequent broadcasts over the Columbia Broadcasting System by thousands of fans who love the smooth flowing melodies of the artists. The unique style of the orchestra is accomplished by four Lombardo brothers and seven other members.

Each of the men in the band has had an interesting background. Guy Lombardo is 29 years old. He has never played his violin. It cost him twelve dollars and has but one string. His pet trait is to listen to other people's opinions and then do as he had always intended. When he doesn't forget

"They Keep a-Running"



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When buying a pump, specify it be equipped with a Century motor.

They are built in sizes from 1/8 to 250 Horse Power.

CENTURY ELECTRIC CO.
1806 Pine St. St. Louis, Mo.
Offices and Stock Points in Principal Cities

Century MOTORS

Guy Lombardo, whose music comes to listeners at 10:00 p.m., Eastern time, over a CBS network.

an appointment he is invariably late.

Carmen Lombardo handles the first saxophone, sings the solo numbers, and writes songs. He frequently plays backgammon until dawn; while Leibert Lombardo is an ardent movie fan, and has invented and built his own home apparatus that is enhanced by both color and sound.

Twenty-one-year-old Victor Lombardo tells people he's much older. He once directed a band known as the Lombardo, Jr. Orchestra. He dislikes sleeping in pajamas, and has a favorite actress but does not remember her name.

Larry Owen is the only member of the band who does not come from London, Ontario. His home is in Cleveland, Ohio. Derf Higman's name is really Fred, which, spelled backward equals "Derf." Ben Davies studied to be a toolmaker, but now plays the bass horn. George Gowan, the drummer, would like to be an aviator, and Jim Dillon, the trombone player, has only one regret—a "race track" suit which he purchased after a "city slicker's" loquacious sales talk and wore six months.

Francis Henry, who plays the banjo, is the composer of many popular songs. He's been called "Muff" since boyhood—ever since he muffed a fly ball in an important neighborhood ball game. Fred Kreitzer's ambition is to live in California, still he doesn't want to leave New York.

• • •

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A dependable, economical pressure system. Write—

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WHEN you write to advertisers don't forget to mention ELECTRICITY ON THE FARM. It will assure you prompt service.

Purdue University Begins Television

TELEVISION broadcasts have recently been inaugurated by Purdue University at Lafayette, Indiana, over station W9XG. Successful reception has been reported from distances as great as Montreal, Canada.

Although television receivers are not yet numerous in the homes of America, Purdue's experiment may lead to the future reception and watching of agricultural demonstrations in our farm homes.

Good Essay

Mother: "Why were you kept after school, Willie?"

Willie: "Teacher told us to write an essay on 'The Result of Laziness' and I turned in a blank sheet of paper."

Tempers and Temperature

(*Electrical Housekeeping Dept. Continued from page 26*)

NOBODY likes the weather. Or almost nobody. Most of us want it a little bit cooler, or a little bit wetter, or a little bit dryer, perhaps. Some want a west wind; some want sunshine; some one wants rain.

The weather as it comes is subject to a considerable amount of complaint. It always has been, but I don't think it always will be, for engineers have already begun to take a hand in it to some purpose. They decided a few years ago that though they could do nothing about the sunshine or the rain, they might be able to do something about the weather indoors when all outdoors is scorching hot.

And they did. They have set up intricate machinery that washes and filters and cools the air flowing through theatres, office buildings, and restaurants. It keeps the air just right for comfort all day long.

It is not unlikely that they will do the same for our little houses one of these days. Perhaps our furnaces will have attachments that we can turn on to keep us cool after we let the fire go out in the spring.

But while we are waiting to buy a complete weather maker for summer comfort, we can do quite a lot to outwit the weather right now, and we can do it with an electric fan.

An Investment for Comfort

There is not much of anything new to say about fans. Nobody has invented a fan that whisks sea breezes or sharp mountain air through your house when you want it, but last year, next year, and this same hot, hot summer of this year, buying an electric fan is investing in comfort—comfort for wives in hot kitchens, comfort for babies restless in stuffy cribs, comfort for tired husbands at the end of the day.

With fans in your house, you are never entirely at the mercy of the weather again. You can always set up a breeze inside, though

Why not turn it on?

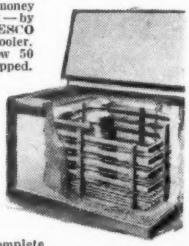
all the winds of the world seemed stilled. And regardless of what the thermometer says, it seems cooler with little gusts of air

(*Continued on page 34*)

ESCO

INCREASES MILK PROFITS

Make more money from your milk—by installing an ESCO Electric Milk Cooler. Milk is kept below 50 degrees until shipped.



ESCO users never miss the premiums paid for properly cooled milk. They find this equipment the greatest assurance of a market.

Now, you can have an ESCO at lower cost than ever before. Write for complete information. Ask, too, about ESCO Dairy Heaters and ESCO Dairy Utensil Sterilizers.

ESCO CABINET CO., 8-EOF-32
West Chester, Pa.

I make ..... cans of milk daily. Without obligation, send full information on ESCO Milk Coolers, Sterilizers and Water Heaters.

Name.....

Address.....

P. O..... State.....

Questions and Answers

Conducted by H. J. GALLAGHER
Agricultural Engineering Dept.
Michigan State College

Question: *The wiring in the heating element of our electric iron has burned out. There is a gap in the wire of about ⅛ inch length. I have taken the heating element apart, and would like to know how this wire may be soldered so as to enable us to again use the iron. The iron was purchased a number of years ago, and we do not know whether or not we can secure a new heating element for it.*

Answer: Due to the heat to which the wire is subjected it would not be practical to solder the wire. It should be welded. This is not a simple matter with wire so small in diameter. It would be far better to replace the heating element if it is possible to secure such, or else purchase a new iron.

Some electric shops might have the necessary equipment for making the weld, but the cost would probably be more than the job is worth.

• • •

Question: *We used to have a small gasoline driven lighting plant before the high lines came through. In order to use a bell circuit in connection with storage batteries, a resistance was placed in the circuit so that too much voltage would not be imposed on the bell. Our electric bell has not been in service for some time, and we are planning to hook it up to our present wiring. Can this bell be used directly on lighting circuits supplied power by the Power Company? The rural service man of the Power Company advised us not to use this hook-up.*

Answer: While the resistance you refer to can probably be used in the A.C. circuits, provided your lighting plant also furnished 120-volt current, it would not be good practice to do so. A far better arrangement would be to connect up a small bell ringing transformer designed for the voltages of the circuit as well as the bell. Thus, if it were a two-volt bell, it would be necessary to step the voltage down from 110 volts to 2 volts. The voltage for which the bell was designed must be known if you want to secure a transformer which will give satisfactory service.

• • •

Question: *I have an opportunity of purchasing a one-horsepower D.C. motor from a machine shop in a neighboring city that is going out of business. This motor is said to be of the "shunt" type. Could I use such a motor on the current furnished me by the local power company? If not, how may I change the motor so it will run on that current?*

Answer: Direct current motors of the "shunt" type will not operate on alternating current, which is the type of current furnished you by your power company. A small "series" wound, direct current motor may be used on either A.C. or D.C. but not the "shunt" type.

There is no practical way of changing the winding on a D.C "shunt" motor to enable it to run on alternating current. In manufacturing D.C. motors, they are designed and dimensioned for a specific type of winding, and even were we to attempt to change the "shunt" wound motor to a "series" wound, we would find that suffi-

(*Continued on page* 34)

You Can Be Sure That
These Companies Will Sell You

GOOD EQUIPMENT

	See Page
Electric Ranges	
Edison G-E Appliance Co.	2
Malleable Iron Range Co.	5
Refrigerators	
General Electric Company	27
Frigidaire Corporation	
Milk Cooling Equipment	
Esco Cabinet Company	31
General Electric Company	27
Frigidaire Corporation	
Chore Motors	
Century Electric Company	29
Stationary Spray Pumps	
Myers & Bro. Co., F. E.	3
Electric Incubators & Brooders	
Oakes Manufacturing Co.	
Electric Poultry Supplies	
Oakes Manufacturing Co.	
Insect Traps	
Folmer-Chapin Corp.	
Water Systems	
Myers & Bro. Co., F. E.	3
Ft. Wayne Eng. & Mfg. Co.	30
Roper Corp., Geo. D.	
Cullman Wheel Co.	
Hot Water Heaters	
Edison G-E Appliance Co.	2
Malleable Iron Range Co.	5
Esco Cabinet Company	31
Churns	
Cherry-Burrell Corp.	
Dazey Churn & Mfg. Co.	
Clipping Machines	
Chicago Flexible Shaft Co.	
Dairy Utensil Sterilizers	
Malleable Iron Range Co.	5
Esco Cabinet Company	31
Bottle Washers	
Cherry-Burrell Corp.	
Electric Corn Poppers	
Excel Electric Co.	
Electric Cookers	
Excel Electric Co.	

The manufacturers in the above list are leaders in their respective lines and the appliances they offer have been proven practical for farm use. They have interesting and valuable bulletins which they'll gladly send you without cost or obligation. Write direct to manufacturer for these bulletins or any information about their products you may need.

For information about devices not included in the above list and the names of reliable manufacturers—use this handy coupon.

TEAR OFF HERE

ELECTRICITY ON THE FARM, 24 W. 40th St., New York

Without cost to me, please have manufacturers send complete information on the following Electrically Operated Equipment which I am thinking of buying:

....

....

My name is.....

Address .....

.....

I get my electricity from.....8-32

Tempers and Temperature

(*Continued from page 31*)

sweeping across your face because, other things being equal, the evaporation from your body goes on much faster when the air that touches it is moving, than when it is still. The faster the evaporation goes on the cooler you feel, and there you are.

When you are the controller of the winds you can swish them about fast or slow; you can pour them steadily in one direction, or swing them slowly back and forth to cool a whole room. For many fans are made to run at different speeds, and some of them are built to turn in an arc so they send a breeze through every corner of the room.

Even if the air is no cooler, it is certainly fresher, for the fan stirs up stale housed air, and keeps it moving so it can be replaced by fresh.

Since fans are built for various uses, it is not difficult to get them to take care of the most common needs.

Sizes and Finishes Vary

They come in various sizes, from tiny fans six inches in diameter up to those sixteen inches across. They are finished in light colored enamel, or blacks or bronze. They are readily portable, or they may be screwed to a bracket or plate on the wall.

If you are interested in good natured wives, consider the ventilating fan. It is designed to fit right into the upper sash of the kitchen window and draw out all the warm air, along with the steam and smells of cooking and the smoke of frying. With this fan in operation, the smoke has not the ghost of a chance to settle on walls and woodwork. If there is a relation between temper and temperature at your house, a fresher kitchen, a breezy kitchen may help to keep both down.

If your living room never gets a breath of air, a fan will bring a young gale on demand. A fan cools off the bed room on the hottest, stillest nights.

While producing comfort is the main job of a fan, it is not above taking on other work as well. It will dry your hair after a shampoo or swimming. It will hurry the drying of the whiting on canvas shoes, or a pair of silk stockings washed too near the last minute.

And whenever you start a fan going, you may consider that keeping the air sweet and fresh is its owns particular contribution to pleasant living in your home.

Questions and Answers

(*Continued from page 32*)

cient space was not available for proper winding of the poles in series with the armature.

There are a lot of secondhand D.C. motors on the market in areas recently changed over to alternating current, but as there is a diminishing market for such motors, they naturally bring very little.

CLASSIFIED ADVERTISING

POULTRY RAISERS—RURAL SERVICE MEN. Write for free bulletin on ELECTRIC POULTRY Equipment, including Brooders, Incubators, Heating Thermostatic supplies for home made equipment. Lyon equipment is proven under all climatic conditions. Investigate. LYON ELECTRIC COMPANY, 2075 Moore St., San Diego, Calif.

Born Linguist

"Did you ever attend a school for stuttering?"

"N-n-no, I j-j-j-just picked it up."—Purple Parrot.

Open Question

A group of workmen were discussing the evolution and origin of man. One of the party remained silent, when a companion turned to him and demanded his opinion.

"I ain't goin' to say," he replied, doggedly. "I remember as 'ow Henry Green and' me thrashed that out once before, and it's settled as far as I'm concerned."

"But what conclusion did you come to?"

"Well," he said, slowly, "we didn't arrive at the same conclusion—no, we didn't. Henry arrived at the 'orspital an' me at the police station."

Cash Prizes Awarded for Best Titles to Front Cover Pictures

Winners for June

1st Prize—$25.00

**"The electric range will bake the pies,
That look so delicious to longing eyes."**
**Mrs. H. M. Senseney,
R. 1, Box 99, Reno, Nevada.**

The following have been awarded $5.00 cash prizes for their June titles:

"Granny's small watchers no longer annoy . . . Her cool electric stove makes baking a joy."

Beatrice Truemper,
c/o Samuel Graham,
R. I., Aurora, Ill.

●

"Grandma tells how baking has changed . . From the old cook stove to the electric range."

Esther Wilson,
R. 2, Sykesville, Md.

●

"The children notice the happy change . . . Since grandma has cooked by the electric range."

Mrs. Chester Clement, Jr.,
R. I, Box 85, Ellsworth, Me.

●

"In the nice cool kitchen the children stay . . . While grandmother bakes pies the electrical way."

Mrs. R. R. Crawford,
R. 2, Spring Hill, Kans.

●

"Healthy appetites are easily supplied . . . Now that grandmother's farm's been electrified."

Mrs. W. L. Lund,
R. 4, Cambridge, Ill.

JUNE COVER

Rules for August

There will be one first prize of $25.00 and five second prizes of $5.00 each. In case of a tie, each winning contestant will receive the full cash prize to which he or she is entitled.

All members of the farm family to whom this magazine was sent may submit titles, but each contestant may submit only one title.

Titles should not be longer than 15 words—the shorter the better—and they need not be rhymes.

Send your title on the coupon below or make out a similar form on a plain sheet of paper or government post card.

Question "A" must be answered correctly.

Entries must be sent to the Title Editor, ELECTRICITY ON THE FARM, 24 W. 40th St., New York, before September 1st.

Winning names and titles will be announced in the October issue.

Follow these simple rules. Your Editor cannot answer letters about the contest.

My title for the August Front Cover picture of ELECTRICITY ON THE FARM is.....
.....
.....
.....

(a) What advertisements in this issue of ELECTRICITY ON THE FARM interested you most?

.....
.....

My name is..... R. F. D.....

Post Office.....County.....State.....8-32

Electrical Farm Equipment Exhibit

INDIANA STATE FAIR

INDIANAPOLIS—SEPT. 3-9

Harvesting Machinery—Water Systems—Household Appliances Dairy and Poultry Equipment

We invite you to make your headquarters in our tent in the farm machinery section.

NORTHERN INDIANA PUBLIC SERVICE COMPANY

356—H